

EMBEDDED COM EXPRESS® MINI

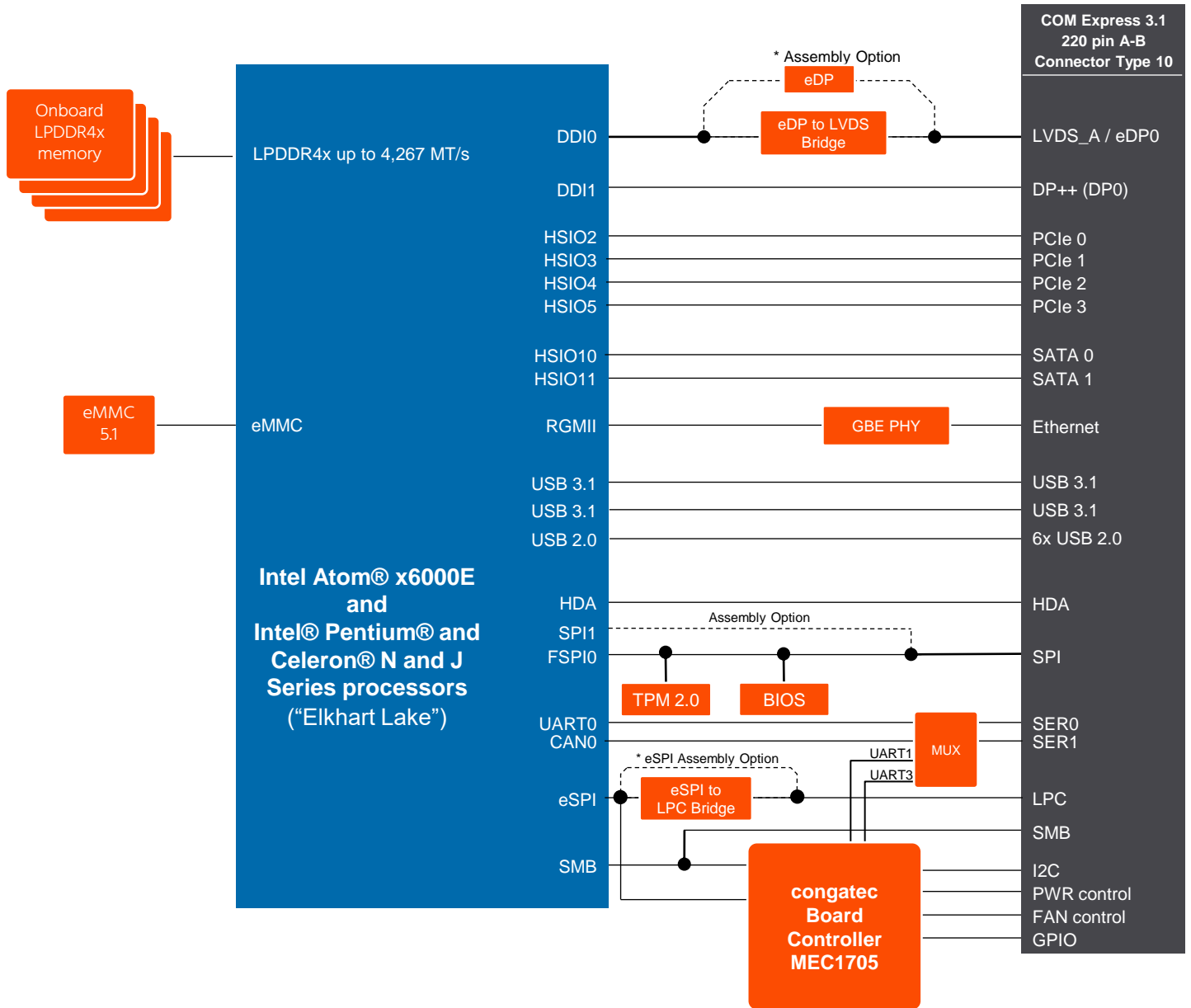
conga-MA7



- COM Express® Type 10 Mini based on Intel Atom® x6000E Series and Intel® Pentium® and Celeron® J and N Series
- High performance Intel® UHD Graphics
- Options for Industrial Temperature Range -40°C to 85°C
- Options for Time Sensitive Networking and Time Coordinated Computing for improved Realtime Capability
- Up to 4.267 MT/s Memory Support

| Form Factor | COM Express® Mini Type 10 | | | | | |
|----------------------------------|--|-----|--|------------------------|------------|---------------------|
| CPU | Processor | TDP | Cores/Threads | Base Frequ./max. Turbo | Gen 11 Gfx | Intel Use Condition |
| | J6413 | 10W | 4 / 4 | 1.8 GHz / 3.0 GHz | 16 EU | PC Client |
| | J6426 | 10W | 4 / 4 | 2.0 GHz / 3.0 GHz | 32 EU | PC Client |
| | x6211E | 6W | 2 / 2 | 1.3 GHz / 3.0 GHz | 16 EU | Embedded |
| | x6413E | 9W | 4 / 4 | 1.5 GHz / 3.0 GHz | 16 EU | Embedded |
| | x6425E | 12W | 4 / 4 | 2.0 GHz / 3.0 GHz | 32 EU | Embedded |
| | x6212RE | 6W | 2 / 2 | 1.2 GHz / --- | 16 EU | Industrial |
| | x6414RE | 9W | 4 / 4 | 1.5 GHz / --- | 16 EU | Industrial |
| | x6425RE | 12W | 4 / 4 | 1.9 GHz / --- | 32 EU | Industrial |
| DRAM | max. 16GB onboard LPDDR4x up to 4.267 MT/s | | | | | |
| Ethernet | Intel® GbE with TSN support real-time trigger | | | | | |
| I/O Interfaces | 4x PCIe Gen3 2x USB 3.1 Gen2 6x USB 2.0 2x SATA III up to 2x UART up to 1 CAN GPIO I ² C Bus SMBus SPI LPC 1x SDIO (option) | | | | | |
| Mass Storage | eMMC 5.1 onboard flash up to 64GB (option for 256 GB) | | | | | |
| Audio | Intel® HD Audio | | | | | |
| Graphics | Intel® UHD Graphics | | | | | |
| LVDS | Single channel LVDS interface up to 1280x1024@60Hz shared with eDP up to 4096x2160@60Hz (option) | | | | | |
| Digital Display Interface | DisplayPort 1.4 4096x2160@60Hz | | | | | |
| congatec Board controller | Multistage watchdog non-volatile user data storage manufacturing and board information board statistics fast mode and multi-master I ² C bus power loss control | | | | | |
| Embedded BIOS Feature | AMI Aptio® UEFI firmware 32 MByte serial SPI with congatec Embedded BIOS features OEM Logo OEM CMOS Defaults LCD Control Display Auto Detection Backlight Control Flash Update | | | | | |
| Power Management | ACPI 5.0 compliant Smart Battery Management | | | | | |
| Operating Systems | Microsoft® Windows 10 Microsoft® Windows 10 IoT Enterprise Linux Android Yocto RTS Hypervisor | | | | | |
| Power Consumption | Typ. Application: see manual for full details | | | | | |
| Temperature Range | Commercial: Operating Temperature: 0 to +60°C | | Storage Temperature: -20 to +80°C | | | |
| | Industrial: Operating Temperature: -40 to +85°C | | Storage Temperature: -40 to +85°C | | | |
| Humidity | Operating Humidity: 10 to 90% r. H. non cond. | | Storage Humidity: 5 to 95% r. H. non cond. | | | |
| Size | 84 x 55 mm | | | | | |

conga-MA7 | Block Diagram



Note: * Assembly options on request only

conga-MA7 | Order Information

| Article | PN | Description |
|-------------------------------|--------|--|
| conga-MA7/x6425E-16G eMMC64 | 049400 | COM Express Mini Type10 module with Intel® Atom® x6425E quad core processor with 2.0GHz core frequency up to 3.0GHz, 1.5MB cache, 16GB 3200MT/s LPDDR4x onboard memory and 64GB eMMC 5.1 onboard flash |
| conga-MA7/x6413E-8G eMMC32 | 049401 | COM Express Mini Type10 module with Intel® Atom® x6413E quad core processor with 1.5GHz core frequency up to 3.0GHz, 1.5MB cache, 8GB 3200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash |
| conga-MA7/x6211E-4G eMMC32 | 049402 | COM Express Mini Type10 module with Intel® Atom® x6211E dual core processor with 1.3GHz core frequency up to 3.0GHz, 1.5MB cache, 4GB 3200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash |
| conga-MA7/i-x6425RE-8G eMMC32 | 049410 | COM Express Mini Type10 module with Intel® Atom® x6425RE quad core processor with 1.9GHz core frequency, 1.5MB cache, 8GB 4267MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash. Industrial grade temperature range from -40°C to 85°C |
| conga-MA7/i-x6414RE-4G eMMC32 | 049411 | COM Express Mini Type10 module with Intel® Atom® x6414RE quad core processor with 1.5GHz core frequency, 1.5MB cache, 4GB 3200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash. Industrial grade temperature range from -40°C to 85°C |
| conga-MA7/i-x6212RE-4G eMMC32 | 049412 | COM Express Mini Type10 module with Intel® Atom® x6212RE dual core processor with 1.2GHz core frequency, 1.5MB cache, 4GB 3200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash. Industrial grade temperature range from -40°C to 85°C |
| conga-MA7/J6426-16G eMMC64 | 049420 | COM Express Mini Type10 module with Intel® Pentium® J6426 quad core processor with 2.0GHz core frequency up to 3.0GHz, 1.5MB cache, 16GB 3200MT/s LPDDR4x onboard memory and 64GB eMMC 5.1 onboard flash |
| conga-MA7/J6413-8G eMMC32 | 049421 | COM Express Mini Type10 module with Intel® Celeron® J6413 quad core processor with 1.8GHz core frequency up to 3.0GHz, 1.5MB cache, 8GB 3733MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash |
| conga-MA7/i-CSP-B | 049450 | Passive cooling solution for COM Express Mini Type10 module conga-MA7 with lidded Intel Atom x6000E processors. All standoffs are with 2.7mm bore hole. |
| conga-MA7/i-CSP-T | 049451 | Passive cooling solution for COM Express Mini Type10 module conga-MA7 with lidded Intel Atom x6000E processors. All standoffs are M2.5mm threaded. |
| conga-MA7/CSP-B | 049452 | Passive cooling solution for COM Express Mini Type10 module conga-MA7 with open-die Intel Pentium/Celeron N and J processors. All standoffs are with 2.7mm bore hole. |
| conga-MA7/CSP-T | 049453 | Passive cooling solution for COM Express Mini Type10 module conga-MA7 with open-die Intel Pentium/Celeron N and J processors. All standoffs are M2.5mm threaded. |
| conga-MA7/i-HSP-B | 049454 | Standard heatspreader for COM Express Mini Type10 module conga-MA7 with lidded Intel Atom x6000E processors. All standoffs are with 2.7mm bore hole. |
| conga-MA7/i-HSP-T | 049455 | Standard heatspreader for COM Express Mini Type10 module conga-MA7 with lidded Intel Atom x6000E processors. All standoffs are M2.5mm threaded. |
| conga-MA7/HSP-B | 049456 | Standard heatspreader for COM Express Mini Type10 module conga-MA7 with open-die Intel Pentium/Celeron N and J processors. All standoffs are with 2.7mm bore hole. |
| conga-MA7/HSP-T | 049457 | Standard heatspreader for COM Express Mini Type10 module conga-MA7 with open-die Intel Pentium/Celeron N and J processors. All standoffs are M2.5mm threaded. |